# **The** California Geotechnic Engineering Association

## **DEEP EXCAVATION: ANALYSIS AND MONITORING** WEDNESDAYS, JUNE 21 AND 28 | 11 AM - 1 PM | VIRTUAL

## WEDNESDAY, JUNE 21

- Earth pressure and settlement estimation Overview
- Mobilized strength design Linking mechanism to settlement calculation
- Finite element method Total stress versus effective stress calculation for clays
- Nicole Highway Failure case study Causes of the failure that occurred in 2004 in Singapore

### WEDNESDAY, JUNE 28



**KENICHI SOGA, PHD** DONALD H. MCLAUGHLIN CHAIR IN MINERAL ENGINEERING CHANCELLOR'S PROFESSOR **UNIVERSITY OF CALIFORNIA, BERKELEY** 

#### **Biography**

Kenichi Soga is the Donald H. McLaughlin Professor in Mineral Engineering and a Chancellor's Professor at the University of California, Berkeley. He is the director of the Berkeley Center for Smart Infrastructure and is a faculty scientist at Lawrence Berkeley National Laboratory. He is Special Advisor to the College of Engineering Dean for Resilient and Sustainable Systems. He obtained his BEng and MEng from Kyoto University in Japan and PhD from the University of California at Berkeley. He was Professor of Civil Engineering at the University of Cambridge before joining UC Berkeley in 2016. He has published more than 450 journal and conference papers and is the co-author of Fundamentals of Soil Behavior, 3rd Edition with Professor James K Mitchell. His current research activities are infrastructure sensing, performance-based design and maintenance of infrastructure, energy geotechnics, and geomechanics. Named to the National Academy of Engineering in February 2023, he is a Fellow of the UK Royal Academy of Engineering, the Institution of Civil Engineers (ICE), the American Society of Civil Engineers (ASCE), and the Engineering Academy of Japan. He is the recipient of several awards including the George Stephenson Medal and Telford Gold Medal from ICE and the Walter L. Huber Civil Engineering Research Prize from ASCE. He is the chair of Technical Committee TC105 "Geotechnics from Micro to Macro" of the International Society for Soil Mechanics and Geotechnical Engineering and of ASCE's Infrastructure Resilience Division's Emerging Technologies Committee. He received a UCB Bakar Prize for his work on commercialization of smart infrastructure technologies.

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 Monitoring - Objectives Instrumentation – Conventional to fiber optic sensing Case study of slurry wall monitoring in London Peck's observational method – Nine ingredients Setting the limits for monitoring – Using the concept of the observation method